

1 Interview Summaries

1.1 Lewiston

Interview Type	Municipality
Interview Location	Lewiston
Interview Date	October 17, 2001 (subsequent phone interviews on December 14, 2001)
Summary Date	December 14, 2001
Interviewer	Thomas Burns agismap1@maine.rr.com
Interviewed:	James Ward, GIS Coordinator, Public Works jward@ci.lewiston.me.us Peter Parker, Planner (phone interview) Joseph Grube, City Assessor (phone interview)
Staff Size (approx.)	1
Budget (approx)	n/a
URL:	http://ci.lewiston.me.us/

1.1.1 Agency Overview

Lewiston has a proud history of manufacturing and industrial innovation. However, today, 33 percent of its commercial space is vacant. Lewiston is a city with a complex infrastructure, a dense built environment, wonderful historic industrial buildings and a major natural resource in the mighty Androscoggin River. There is much to do in Lewiston and GIS is a centerpiece of City Hall's plans.

1.1.2 GIS Initiatives

Lewiston is just now embarking on wider use of its considerable, citywide GIS datasets. Although the process of data development began in 1997, widespread use has not been made of the planimetric datasets, the parcel composite or the orthophotos.

However, just recently, a GIS Coordinator has been named for the City and a Planner had GIS assigned to be part of his core duties. Individual staff within the Sewer and Water Division has been steadily capturing data such as manholes, catch basins and water valves with the use of GPS.

The GIS Coordinator meets regularly with other GIS professionals in the Lewiston-Auburn area and keeps in touch with the Androscoggin Valley Council of Governments GIS Coordinator to share technical resources.

1.1.2.1 Overview of GIS Utilization

City staff has just begun their period of data discovery. The GIS Coordinator has an opportunity to spend 100% of his time promoting the use of GIS throughout all city departments.

At present, their comprehensive data layers have supported these efforts:

- Sewer Division used data to map CSO catchment areas;
- Planning Division created school bus routes;

- Planning Division analyzed neighborhood density to support school apportionment;
- Economic Development has used GIS images to promote the Lewiston Gas Works redevelopment;
- Planning Division is using data to create landuse analysis layer.

The Public Works Department and City Administrators showed strong leadership in 1997 when they issued a series of Municipal Bonds over a six year period to fund the aerial flight, ground control, planimetric data capture and creation of the parcel composite. The initial bond was \$100,000 with subsequent bonds of \$250,000, \$200,000, \$150,000, \$150,000, and present (2002) \$100,000 respectively. That leadership team is still in place and supportive of the GIS Coordinator's activities.

Part of that leadership effort included entering into a cross-town GIS Needs Assessment with the City of Auburn in 1997. Since then, both cities have had close communication in their overall GIS efforts.

The City of Lewiston has also had a close working relationship with a consultant who has helped train two individuals and who has created customized ArcView projects to facilitate browsing city datasets.

The effort in the Planning Department and in the Sewer Division is more opportunistic and related to existing staff that possess proficient AutoCAD skills. The 3rd party consultant was instrumental in training the Planning Division staff member and helped him achieve a break-through in his understanding of basic GIS concepts and how to use his ArcView software effectively. For the first time this year, the Planning Division will attempt to maintain their digital parcel composite.

The GIS Coordinator is preparing his first budget as coordinator. Since the bond issues, the GIS program has been funded through the Capital Improvement Program.

1.1.2.2 GIS Operating Environment and Infrastructure

The GIS Coordinator presently has his offices in Public Works. The Planning Division is in City Hall and a third GIS location is within Public Safety. All three offices are connected with Fiber Optics offering 10mps LAN speed over a shared network. All GIS data are installed on the network.

Their software environment is a combination of AutoCAD 2000 with AutoCAD Map, AutoCAD v14 and eight copies of ArcView 3.2a. There are no immediate plans to upgrade to ArcGIS 8.1 in the near future. Traditionally, staff in the public works department is proficient in the use of AutoCAD. This in-house skill has helped them make use of their existing datasets but there is a need to migrate towards ArcGIS to be able to perform different types of analysis and to produce higher-quality map displays.

The 3rd party consultant plans to use ArcIMS as an intranet data browser and map maker. ESRI has offered to grant Lewiston free copies of ArcIMS but plans are just in the formative stage for this new enterprise-wide software format.

1.1.2.3 GIS Data Resources and Requirements

1.1.2.3.1 Spatial Data

Existing data sets include:

- Full Planimetric datasets at 1:480 (1/3 of dense, urban area)
- Full Planimetric dataset at 1:1200 (2/3 rural areas)
- Parcel Composite
- Utility Infrastructure (water supply, sewer, storm)
- Pavement rating/management
- Zoning
- Flood plain
- Complete OGIS datasets
- Complete Orthophotos (black & white)
- Manholes, Catch Basins, Water Valves

Analysis layers, including:

- CSO catchment areas
- General Zoning
- Wards
- Water supply network modeling

Currently unavailable but desired data sets include:

- Better Landuse coverage;
- Current 'Join' of Assessor tabular data to spatial parcel composite;
- Street Tree Inventory;
- Snow Plow Route maps;
- Road Surface Management System datasets;
- Light Pole inventory;
- Bridge inventory.

1.1.2.3.2 Attribute Data

The most difficult attribute data problem is timely attachment of Assessing data to the parcel composite. The set of nominal attributes from the Assessor database which can be exported from the present Assessor's software, a CAMA-based non-windows software developed in the 1980's known as 'The Assessor', is limited to just a few fields. The last flat-file output was executed in 2000. The City's overall financial software, Keystone is also able to produce a flat-file of certain assessor data but both methods have proved problematic. The Assessors office is migrating to a new windows-based CAMA software called CLT Universe which should allow a more dynamic link.

The GIS Coordinator has not manipulated attribute data for the most part including attribute data in the parcel composite. However, he anticipates building several attribute datasets to complement existing point, line or polygon coverages. For these datasets he is designing logical unique identifiers. They include:

- Accident data attribute data for road centerline data;
- MDOT road segments assignments and naming to land base road centerline data.
- Average daily traffic counts.

1.1.2.3.3 Data Issues

A major issue is the increasingly unreliable assessor data attached to the composite. When the planner produces abutter's lists, or lists of any kind, he has to have staff verify his list against more current assessor records.

A possible issue regarding datasets between Lewiston and Auburn is their differing choices of vertical datum: Lewiston chose NGVD 1929 while Auburn chose NAVD 1988.

1.1.2.4 GIS Applications and Application Requirements

There are several ArcView applications built with Avenue that the 3rd party consultant is currently rewriting in Visual Basic in anticipation of a change to the ArcGIS 8.1 software platform. They are:

- An Assessor Viewer to perform custom or pre-defined queries and locate property based on criteria;
- ArcView Project buttons to search the network for data based on intuitive naming conventions that resolves complex path names (i.e theme or layer adder);
- A map production tool that prints maps out by their assessing tiling system.

1.1.3 Other Relevant Issues

There are a significant opportunities for exchange between the twin cities of Lewiston and Auburn's GIS teams. Further, a consulting firm hired individually by both cities currently facilitates this relationship.

The GIS Coordinator intends to prepare an ordinance that will require plans for new development to be submitted in digital format. At the same time, he is reluctant to require that data to be submitted on the city's datum fearing that the cost to tie the project into known monumentation would discourage development.

The Sewer and Water Division of Public Works chose the Cartegraph Suite to manage their utility infrastructure. Integration with ESRI's products and output is anticipated.

The Assessor does not presently use ArcView applications to access GIS datasets or his own parcel composite. He would like broader consensus and a common understanding of

what is expected of the Assessor information that would be reflected in a common GIS budget administered by the City Administrator. Presently, the budget and the projects that flow from that budget are perceived to be more closely associated with Public Works projects and not oriented to assessing data or the parcel composite or with applications associated with assessing activities. The Assessor would use a GIS application that would help him with underlying sales and pricing for instance and would expect his staff to take advantages of efficiencies using the digital data. A common, city-wide GIS budget would set priorities for data gathering and data development in his view.

The Planner may have had the most revealing comment during the interviews when he wondered aloud why ‘with my GIS capability, people in City Government don’t ask me for the information I can produce?’ Perhaps even with Lewiston’s present GIS capability and with good support from leaders in City Hall, there is not an awareness still of what GIS is, there is no vocabulary shared by staff to articulate needs, and perhaps, there is still general suspicion of the technical aspects of GIS.

1.1.4 Major Benefits and Cost Justification

The GIS Coordinator has not yet had to justify GIS expenditures. However, with the first budget about to be put together, justifications cannot be far behind.